DOCUMENT RESUME

ED 292 237 EC 202 019

AUTHOR Nel, J. F.
TITLE The Actualization of Giftedness at the Extracurricular Centre for Highly Gifted Children in Pretoria.
PUB DATE Jun 84
NOTE 16p.; Paper presented at the International Conference: Education for the Gifted "Ingenium 2000" (Stellenbosch, Republic of South Africa, June 26-29, 1984). Some diagrams will reproduce marginally because they contain small type.
PUB TYPE Speeches/Conference Papers (150) -- Reports - Descriptive (141)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS Acceleration (Education); Curriculum Development; Elementary Secondary Education; *Enrichment Activities; Extracurricular Activities; Foreign Countries; *Gifted; Humanistic Education; *Program Development; *Self Actualization; *Special Programs
IDENTIFIERS *South Africa (Transvaal)

ABSTRACT

This paper describes the philosophy and development of the Extracurricular Centres for Highly Gifted Children in Transvaal, South Africa. The centers' concepts of "gifted" and "highly gifted" are defined, and characteristics of gifted children are listed. The centers offer enrichment and acceleration classes in subjects outside the usual school curriculum and are attended by primary and secondary school pupils. The program consists of study units or themes chosen from various subjects, emphasizing individual work, independent research and discovery, and projects. Classes are small, and students have freedom of choice regarding preferred subjects. The centers' general objective in gifted education is to present structured guidance for the development of a creative, problem-solving ability rather than details concerning the practicalities of present-day life. An explanation of the centers' theoretical framework focuses on the belief that gifted children should be involved in totality and their giftedness should not in the end depend entirely on intellectual ability but on functioning-in-totality. In this way, actualization becomes his or her own, self-made actualization. (JDD)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

G.7.5.1

ED292237

THE ACTUALIZATION OF GIFTEDNESS AT THE EXTRACURRICULAR CENTRE FOR HIGHLY GIFTED CHILDREN IN PRETORIA

- J.F. Nel, Head of the Extracurricular Centre for Highly Gifted Children, Onderwyskollege Pretoria, Republic of South Africa

INTRODUCTION

John F. Kennedy said in Dublin, Ireland on June 28, 1963

> "The problems of the world cannot possibly be solved by sceptics or cynics whose horizons are limited by the obvious realities. We need men who can dream of things that never were."

I believe that in the future our standard of living will double, technology will have tamed pollution and poverty will have disappeared in some countries. I foresee a whole new high technological industries, a new type of professional man that will improve our quality of life. We will have better management now than they've had even before in any decade. The result of this is the replanning of our educational system which has been an ideological watershed where you finally drop the Old Deal as the main agenda and go back to efficiency, productivity investment, competitiveness and responsibility. These words simply were not used five and ten years ago. That's a very important shift. It has had a big role in straightening out the school systems. Children and specifically gifted children take their courses more seriously and they take more serious courses. It had a tremendous impact on government planning in restructuring our educational systems.

Gifted Children Education and more specifically Extracurricular Centre Education can and is becoming the most prestigious "think tanks" in Transvaal. There they are becoming involved in strategic research and are beginning to "think the unthinkable".

By introducing high technology in gifted education it is bringing back a sense of excitement, achievement and progress which even astronauts and outer space no longer elicit. The impact of whole new industries, from robotics to biotechnology to genetic engineering, energy physics will spur productivity and growth, as well as improve the quality of life by reducing pollution and enhancing medical treatment. High technology will

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)
☑ This document has been reproduced as received from the person or organization originating it.
☐ Minor changes have been made to improve reproduction quality.
• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY
J.F. Nel
TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

EC 202019

BEST COPY AVAILABLE

Nel

also reconfirm and restimulate the imagination of the South African gifted and could become an exporter of technological innovation, a role which we could share with leading countries like America, Japan and Germany, but if not, it could be detrimental enough.

High technology education will reconfirm and restimulate imagination to the horizon which the future requires. To achieve this Gallagher points out that

> "Knowledge, learning, information, skills and talent are the new raw materials of international commerce and are today spreading through the world as vigorously as miracle jobs, synthetic fertilizers and blue jeans. Those nations which wish to travel first class in this worldwide information society will need all our talents and all our citizens for success in the information ages we live in."

The direct result is that the Director of Education, Prof. J.H Jooste established the centres in Transvaal.

DESCRIPTION OF GIFTEDNESS: A CHANGING CONCEPT

As you know, there are numerous descriptions and definitions of talent and giftedness. The Extracurricular Centres regard giftedness as a comprehensive concept that includes in reality all forms of exceptional potentialities or individual qualities and distinctions. The aim of the Extracurricular Centres in Transvaal is to actualize this exceptional cognitive potential on a high level.

> "For the 1957 yearbook of the National Society for the Study of Education, Witty (1958) recommended that the definition of giftedness be expanded and that we consider anyone gifted whose performance, in a potentially valuable line of human activity, is consistently remarkable."

Furthermore Barbe and Renzulli quote Torrance:

> "Recent breakthroughs in research concerning the human mind and personality and their functioning have resulted in the emergence of a new and challenging concept of giftedness. This concept stresses the importance of emphasis upon potentiality rather than upon norms and single measures of giftedness. It involves movement away from concepts of a single type of giftedness and fixed intelligence and beliefs in predetermined development.

At the Extracurricular Centres in Pretoria it was decided to embark on a criterion of intellectually highly giftedness and excellent achievement and these guidelines are followed to give the pupils the opportunity to actualize their potential accordingly.

Transvaal has decided that special provision should be made for the all-round high achiever with an IQ of 130 and over by means of specialised teaching programmes and services. They therefore introduces special programmes and also created the Extracurricular Centres for Highly Gifted Children in densely populated areas. Through carefully developed programmes and specially selected lecturers from universities and colleges they stimulate the highly gifted pupils' potential in such a manner that they become creators.

HIGHLY GIFTEDNESS AS MOST MEANINGFUL CONCEPT OF TOTALITY

To start with, it must be emphasized that the highly gifted pupil is involved as total-child-in-education in his learning and development on his way to adulthood. In the pupil's special situation his learning and development to adulthood progress together and form a single contingency in which the elements can be distinguished but not separated.

When the concept giftedness is examined, it must be remembered that one is considering an essential quality of the child as a person. The child and his personal qualities - giftedness is also seen as a quality - are not disconnected units but form a totality - in - function. Giftedness is a way of being (existing in the world), and thus a way in which the child gives sense and meaning to his world and develops his own life in his own unique way.

Highly giftedness can then be described as unique potential with a specific ability which will enable a person to achieve exceptionally high in various fields with motivation to achieve the highest goal in a specific field of study.

The concept highly giftedness is thus comprised of three essentials, namely:

- exceptional potential with a specific higher ability
- and the acualization thereof in the form of
- excellent achievement in the specific field(s) of study.

The criterion by which highly gifted children are allowed to

enter the Centres are the following:

- Intellectually highly gifted pupils (excellent achievement in all school subjects). Minimum IQ or 130 and average school percentage of 80% over two years. For further research there is close cooperation between the Faculty of Education of the University of Pretoria where we deal with underachievers.

- Specifically highly gifted pupils (excellent achievement in one or more school subjects, extramural school activities or specific personality traits such as leadership will have to be considered for the future in accepting them at the centre.)

Educational practice during the last four years at the Centre has showed that the highly gifted are children whose thought processes function in an exceptional way. Some characteristic qualities of these childrens' way of thinking are:

- flexibility of thought. This can be discerned in their spontaneous fluency, expressive power, abstract power, word fluency and restructuring fluency

- mathematical ability

- good memory

- convergent and divergent intellectual ability

- ability to deduct consequences

- ability to draw conclusions

- exceptionally high intelligence quotient and consistent achievement in all subjects

- exceptional individual qualities: e.g. leadership; the ability to communicate with other pupils and to maintain healthy and positive interpersonal relationships

- a particularly high intellectual ability, artistic talent, musical talent or mechanical ability and consistent high achievement in that specific field

- eloquence

- manifested creative ability
- leadership potential
- exceptional achievement in sports or athletics
- exceptional personality traits or potential on the grounds of standardised test results. Some gifted children are in practice underachievers because they do not actualize their potential.

EXTRACURRICULAR CENTRE FOR GIFTED CHILDREN

As a result of the untiring efforts of educationists, different centres for the gifted were established in the large areas during the past years. These centres operate on a strictly extracurricular basis. The enrichment and acceleration programmes they offer are today regarded as a valuable complement in developing creativity and the higher thought processes.

PROGRAMMES OFFERED

The centre now offers and will in future offer enrichment and acceleration classes in subjects outside the usual school curricula and aim at providing these highly gifted pupils with a challenging learning situation in particular fields of experience, conducted by experts who range form specially selected teachers to university professors.

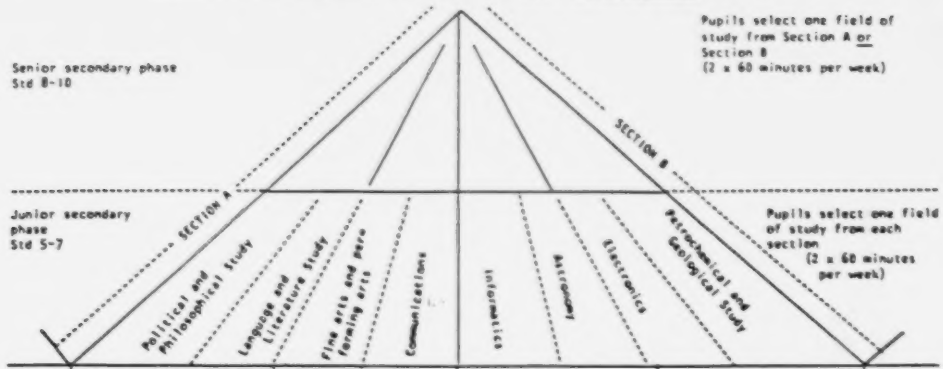
The programmes which are available to primary and secondary school pupils after school hours are:

Primary schools: Thematical Studies

Secondary schools:

- Political and philosophical studies
- Language and literature studies
- Creative and performing arts studies
- Communication studies
- Informatics (computering)
- Astronomical studies
- Electronics
- Petrochemical and geological studies.

DIAGRAM OF PROGRAMMES AND PERIOD ALLOCATION


Senior secondary phase
Std 8-10
Pupils select one field of study from Section A or Section B
(2 x 60 minutes per week)
SECTION B
SECTION A
Junior secondary phase
Std 5-7
Political and Philosophical Study
Language and Literature Study
Fine arts and para forming arts
Communications
Astronomy
Electronics
Petrochemical and Geological Study
Pupils select one field of study from each section
(2 x 60 minutes per week)

Std 4	Man - his origin and establishment (Themes from Biblical Studies, History and Geography		Man and science (Themes from the Natural sciences and Mathematics)		Man and the arts (Themes from the fine and performing arts: Art, Drama)		Man and communication (Themes from language, communications, radio, TV, newspapers)			Thematic Study - All the subject/study areas to be studied. A basic orientation 1 x 45 minutes - 1r week
Std 3	Afr. L.I Eng. L.I	Natural Sciences	Mathematics	History	Geography	Biblical Studies	Art	Music	Drama	
Std 2	Afr. L.I Eng. L.I	Natural Sciences	Mathematics	History	Geography	Biblical Studies	Art	Music	Drama	

NATURE AND APPROACH OF THE PROGRAMMES

(1) At primary school level the programme for highly gifted children commences in standard two. At secondary school level the highly gifted pupil begins with a field of study of his choice.

(2) The programme consists of study units (themes) chosen from various subjects.

(3) The programme is not prescriptive as far as the sequence of themes and the depth of study are concerned. The latter will be determined mainly by the interest of the pupils. Work on a study unit can, where necessary, extend over more than one period.

BEST COPY AVAILABLE

(4) The themes cover a wide spectrum of interests.

(5) The themes are constantly being evaluated by the lecturers, pupils and the compilers. The child's participation, initiative and enthusiasm are important considerations when evaluating the programme.

(6) Subject specialists present the programmes.

(7) Details supplied with respect to the contents of the themes merely serve as a guiding line. This guide-line leaves room for creative thought and personal initiative and action.

(8) Basic subject knowledge necessary for good progress is supplied by the lecturer. This continued instruction, however, is mainly directed at individual pupils.

(9) The educational method amounts to a large extent to the pupils' individual work, independent research and discovery and project study.

(10) It is essential that in the field of study, the pupils are brought to the synthesis of their own discoveries so that the acquired knowledge becomes a personal possession and does not therefore remain unrelated to everything else.

(11) The specific aim of each field of study has been specified to serve as guide-lines for the presentation and the effective implementation of the programme. It should be emphasized that aims and guide-lines are neither restrictive nor prescriptive.

(12) Examples of how study themes in the various fields of study can be approached, are given. An appeal is made to lecturers to give their own initiative and justifiable pedagogic-didactic insights a free hand.

(13) Subject contents will inevitably overlap in some cases. This need not be a source of concern since it affords ideal educational opportunities in which the integration of human knowledge, thought and life en general is brought to the pupils' attention.

The contents of the programmes of all these fields of study have been selected by the various curriculum committees in such a way that progressive accumulation of subject knowledge

takes place and that an independent research project can be attempted in standard 9 and 10.

ACTUALIZATION PROCESS AT THE CENTRES

The purpose of the programme for the highly gifted pupils at the centre is defined in the framework of the programmes. It is namely to assist these pupils in accumulating valuable, useful and interesting knowledge which will enrich their lives and will actively promote their further studies at university.

The fields of study present an excellent opportunity to achieve these objectives. Whereas mathematics is the language of all science and as such is indispensible to the development of a logical, analytical intellectual capacity, the aims are the study of logical, discreet problem solving and problem finding that make a contribution to all fields of study and social structures. The subjects may, moreover, exercise an extremely penetrating, formative influence on the intellectual capacity and reasoning creative powers, problem solving and problem finding of the pupils.

The framework of programmes for highly gifted pupils presented here must be seen against this background. The general objective is to present structured guidance for the development of a creative, problem-solving ability rather than details concerning the practicalities of present-day life.

Successful programmes ensure that an atmosphere is created in which the pupil is motivated by challenge, ambition is roused and the acquisition of knowledge is accelerated. Programmes are planned in such a way that these requirements are met. The centre provides all gifted pupils with the opportunity to choose the subjects they want to take. Provided his talents match the requirements of the subjects, the highly gifted pupil should be actively stimulated by these programmes. Each programme provides for the development of his specific highly gifted abilities. For example the following subject matter is included in the astronomy programme:

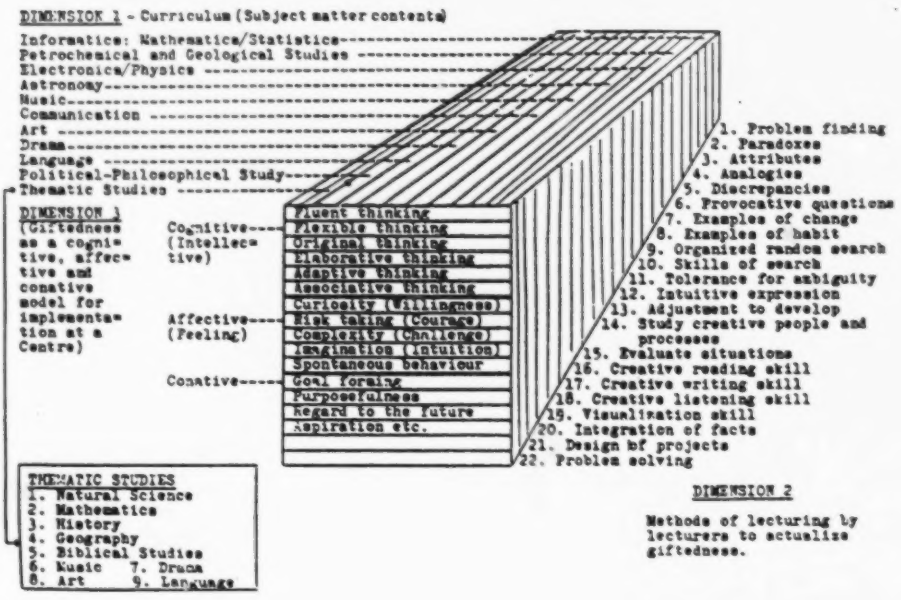
Spherical coordinate systems, the equation of time, astronomical instruments, universal laws of motion and theories of the universe (applied mathematics). the solar system, the stars, modern development in space research, computer languages (Basic, Pascal, graphics, etc.)

I must emphasize that every gifted pupil enjoys freedom of

choice regarding the subjects he wants to take. The contents of all the subjects are structured and enable every pupil in the specific programme to make a choice of activities he wants to put into practice. They have unlimited opportunity to participate in a wide variety of exploratory experiences and activities that encourage them to think creatively. The contents of all programmes are focused on the systematic development of knowledge. The lecturers, as professional educators in specialized fields, guide the type of processes that are to be developed through the activities in their special programmes. Furthermore, the freedom of choice and the small classes enable every pupil to select his specific method of learning. It is, however, the lecturer's responsibility to assist the gifted pupil in the development of his skills so that he keeps on inquiring about the unknown and retains the motivation to become a problem solver and problem finder in the field of study and in his future profession. This is where we lay the foundation for a flexible mind to innovate the future.

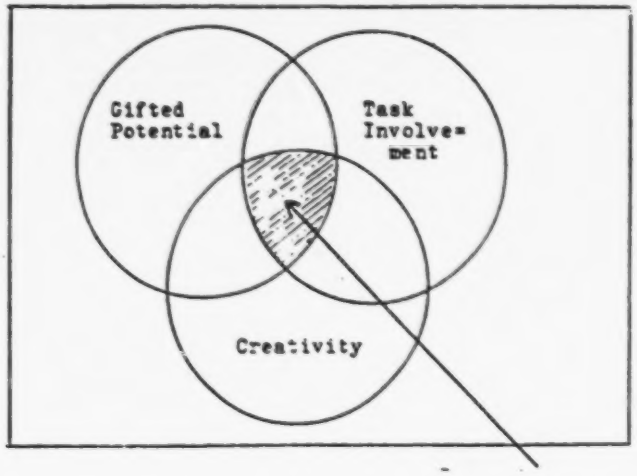
The diagram of actualization of giftedness as a totality-in-function explains the interaction between thought development and subject contents:

ACTUALIZATION OF GIFTEDNESS AS A TOTALITY-IN-FUNCTION



It must be stressed that although there is a much freer, less restrictive atmosphere in the classroom, the pupils are working according to a structural pattern with progressive accumulation of knowledge in their field of study. In each gifted pupil the skills necessary for advanced levels or inquiry in his field of interest are developed. To achieve and stimulate a gifted pupil's inquisitiveness, he must be motivated to initiate and develop his own project through the theoretical knowledge he has acquired.

The following diagram, based on a concept of Renzulli with further additions, emphasizes the interaction between a person's totality-in-function as a human being and his motivated involvement as a functioning whole in the actualization of his giftedness.



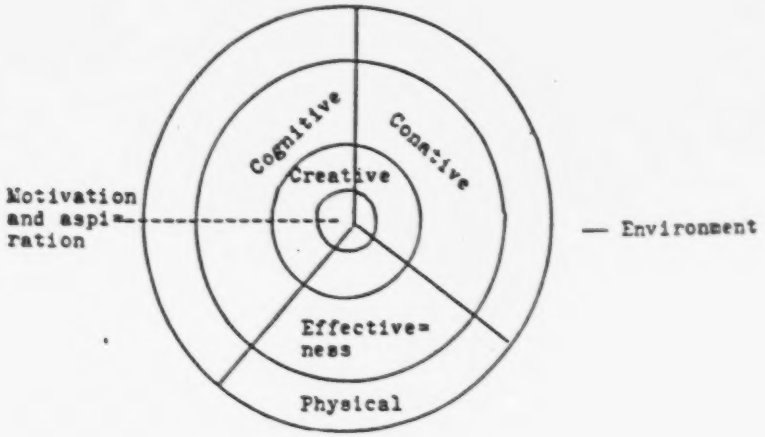
The actualized motivation to reach the goals that are set.

Renzulli explains:

> "Giftedness consists of an interaction among three basic clusters of human traits - these clusters being above average general abilities, high levels of task commitment, and high levels of creativity. Gifted and talented children are those possessing of capable of developing this composite set of traits and applying them to any potentially valuable area of human performance. Children who manifest or are capable of developing an interaction among the three clusters require a wide variety of educational opportunities and services that are not ordinarily provided through regular instructional programmes."

In the light of the aforesaid a trend is followed at the extracurricular centre in which the importance of the different dimensions of human functioning and the interaction between the dimensions of giftedness are explained. We believe that the gifted child should be involved in totality and that his giftedness should not in the end depend entirely on intellectual ability but on functioning-in-totality. Furthermore the interaction between the individual and his environment is emphasized and the influence this interaction has on the functioning of the gifted child is recognized. This means that we create the atmosphere for growth of the unknown.

The following outline of the highly gifted child in his functioning-in-totality offers a meaningful starting point. Actualization of giftedness at the centre also takes place through its functioning-in-totality.



This meeting in totality between the gifted child and his environment, affords him the opportunity to discover his giftedness. When the gifted child is accompanied pedagogically, his initiative develops and he will be able te explore his environment, differentiate, integrate and analyze contents.

Accompanying actualization should therefore in totality become own, self-made actualization, based of affective, cognitive and normative experience. Thus provided there is an adequate amount of basic security, the available life energy can flow into the construction of a strongly unified, highly differentia-

ted and hierarchically ordered system and personality organization (Klopfer,1954, p.571) which means a total actualization.

Each lecturer is required to devise individualized programmes to enable every gifted pupil to determine his own rate of learning.

The individual programme contents are enriched and the pace of learning accelerated by means of methods, materials and instructional techniques that are mainly concerned with the development of a higher thinking process which will actualize a gifted pupil's given potential on the level of his intellectual development.

The aim of these programmes is to enable every gifted pupil to assimilate the contents, draw conclusions, to integrate, to analyze, to develop new ideas and to explore the contents further. Their objectives is to let every gifted child deal more effectively with the given contents. Programmes should give ample opportunity for creative thought development including critical thinking, problem solving, reflective thinking, divergent thinking, sensitivity training, leadership development and productive thinking and to become a problem finder.

Wertheimer states:

> "The function of thinking is not just solving an actual problem but discovering, envisaging, going into deeper questions. Often in great discoveries (and inventions) the most important thing is that a certain question is found."

Gallagher concludes:

> "The world desperatively needs a new generation of problem finders to restate, redefine and emphasize the important rather than the trivial."

One of the major characteristics of the actualization process at the Extracurricular Centre for Highly Gifted Children is that they make allowance for open-ended responses, enabling the brighter gifted pupil to ascend to higher cognitive levels of fluency, flexibility, originality and concept in the process of divergent problem solving. By integrating sophisticated modern technology such as computers, electronical equipment, videos, telescopes etc. the gifted pupil is enabled to actualize his unique potential in his own way.

Nel

The gifted person designs his world as a totality and he, as totality, is present in various ways: more specifically as modes of experience on both affective and cognitive levels. The special programmes for gifted pupils are designed to give them the opportunity to expand their thinking and feeling processes to whichever level their own natural gifted potential aspires to.

With the implementation of problem solving methods, ordered thinking is heightened, which in turn makes possible a perceptive landscape of giftedness-for-me.

All the significant events in the unfolding giftedness stem from the child's actualization of himself as being-gifted-in-the-world. This boils down to the cognition of his landscape of giftedness, which implies inter alia that it be disclosed, ordered, designed, objectified, integrated, synthesized, structured, constituted, thematised, differentiated, related and distanced.

CONCLUSION

The Centre provides every gifted pupil the opportunity to:

- Development of a structured approach to general problem solving and problem finding.
- Development of the pupils' creative intellectual capacity.
- To extend the pupils' knowledge (expertise and skills) in areas not formally covered by the school curriculum.
- It is one of the essential characteristics of the centre that although they encourage creative thought of the highest order, they also demand that the product of this creative thinking be applied to real situations. Although it has been clearly stated that the programmes will not concentrate on the latter aspects, this does not imply that the pupils should be kept away or protected from the realities of their environment - on the contrary, the programmes offer the opportunity for cultivating qualities such as self-discipline. Assignments should, therefore, be fully completed whenever possible provided with documentation and implemented - so that the pupil's self-esteem will be boosted and real milestones of progress is indicated.

- Systematic development of the pupil's interest in problem solving and problem finding in areas which extend beyond his own present knowledge and have a wider significance in society. The programmes are geared to justify the pupil's ability to contribute to society without jeopardising his own individual development. A balanced programme endeavours to comply with both needs.

- Stimulation of the pupils' interest in the technological world of the future and the demands that will be made on technology.

- Development of the pupils' ability to communicate. In order to ensure that a person will eventually be capable of making a contribution to science and society, especially the (non-) verbal ability to communicate must be stimulated from an early age. A journal was therefore established in which pupils articles and contributions are published and competitions are announced.

- This implies that each highly gifted pupil in standard 9 and 10 can submit his own independent research project or own creative work for acceptance by a magazine. Visits to scientific institutions and big industrial works form part of the training programme. The staff at the centre realise that all gifted children need to be challenged, that they seek opportunities to work independently, that they display initiative and would like to be creative. The centre offers the gifted child the opportunity to achieve and teaches the child that true achievement does not happen of its own accord but that persistent effort and concentration are essential.

- At the beginning of every year all lecturers undergo a special programme to help them to deal with gifted pupils in the classes and how to develop their thought processes.

- The centre has also initiated scientific future-orientated study tours to acquaint them with modern and future research.

A last point which I would like to stress and which we must take into consideration is that:

> "History is not kind to man - take advantage of our human potential and solve the ever growing problems of human society."

Nel.

REFERENCES

Gallagher, J.J.: World Gifted, Vol. 4, May 1983.

Human Sciences Research Council: Provision of Education in the R.S.A., 1981.

Human Sciences Research Council: Education for Children with special educational needs, 1981.

Nel, J.F.: The actualization of giftedness at extracurricular centres, 1982.

Renzulli, J.S.: What makes Giftedness? Re-examining a definition Phi. Delta Kappan, 1978.

Renzulli, J.S.: The Enrichment Traid Model, 1979.

Torrance, E.P.: Teaching Gifted Elementary Pupils, Research Concepts and skills, 1979.

Treffinger, D.J. and Gowan, J.C.: "An Updated Representative List of Methods and Educational Programs for Stimulating Creativity", The Journal of Creative Behavior, 1971.

Wertheimer, M.: Productive Thinking, Harper and Row, New York, p. 123.

Barbe, W.B. and Renzulli, J.S.: Psychology and Education of the gifted. New York' Holstead, Press Division of John Wiley and Sons, 1975.

Klopfer, Bruno: Developments in the Rorschach Technique. Harcourt, Brace and World Inc., New York, 1954.